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FISCAL IMPACT REPORT

SPONSOR Candelaria/Sariñana ORIGINAL DATE 3/9/19
LAST UPDATED _____ HB _____

SHORT TITLE Study Expanding Computer Science Ed SJM 9

ANALYST Liu

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY19	FY20	FY21	3 Year Total Cost	Recurring or Nonrecurring	Fund Affected
Total		Indeterminate				

(Parenthesis () Indicate Expenditure Decreases)

Relates to HB341
Relates to Appropriation in the General Appropriation Act

SOURCES OF INFORMATION

LFC Files
Legislative Education Study Committee (LESC) Files

SUMMARY

Synopsis of Joint Memorial

Senate Joint Memorial 9 requests the Public Education Department (PED) convene a computer science education task force to develop a state strategic plan for expanding computer science education. The memorial further requests the task force present the strategic plan to LESC before January 17, 2020, and PED to make the plan publicly available by February 20, 2020.

FISCAL IMPLICATIONS

The memorial does not make an appropriation but requires PED to convene a task force with representation from various stakeholder groups. Costs for this task force will depend on the membership of the task force, staffing needs, and how often the task force convenes. As such, the operating budget impacts are indeterminate.

The HAFS Substitute for House Bills 2 and 3 includes \$5 million for science, technology, engineering, arts, and mathematics (STEAM) initiatives, which could be used for this purpose. Additionally, the substitute includes \$5 million for career and technical education pilots, which may be applicable to components of this plan.

SIGNIFICANT ISSUES

LESC notes the October 30, 2018, issue of the New Mexico Register contained a proposed rule to adopt New Mexico Science Standards, which would require educators at school districts and charter schools teaching computer science to adhere to standards published by the Computer Science Teachers Association (CSTA) and the Association for Computing Machinery. If adopted, the new standards would be effective July 1, 2019.

According to LESC, the standards introduce computer science concepts in computing systems; networks and the Internet data and analysis algorithms and programming and impacts of computing. As early as kindergarten, students in computer science related lessons should be able to describe basic hardware and software problems or write programs with simple sequences and loops to express ideas. In third through fifth grade, the standards build on the foundational concepts and ask students to perform higher order critical thinking, like describing real-world cybersecurity issues and organizing and presenting data to highlight relationships and support a claim. In sixth through eighth grade, the standards evolve in complexity to incorporate more design elements, asking students to systematically identify and fix issues in computing devices, collect and transform data to make it more useful and reliable, and design programs collaboratively with a development team. Ninth and 10th grade students would be responsible for fully understanding complex computer science principles, and the standards include an optional level for 11th and 12th grade students designed to prepare students for a career in a computer science-related field.

ADMINISTRATIVE IMPLICATIONS

The memorial requests PED convene members of the task force, which will include representatives from the following:

- Computer science industry,
- Educational nonprofit organizations,
- New Mexico school superintendents' association,
- Governor's office of policy and planning,
- Higher Education Department,
- Computer science department from an institution of higher education,
- College of education,
- CSTA,
- Both major political parties from the House of Representatives and Senate, and
- PED.

The memorial requests PED provide staff support for the task force in developing the state strategic plan for expanding computer science education in elementary and secondary schools, which will include a

- Statement of purpose describing objectives, goals, strategies, and timelines for implementing a computer science education program;
- Summary of the current state landscape for K-12 computer science education, including the diversity of participating students;
- Plan for expanding computer science education opportunities to all schools within 5 years;
- Plan for development of rigorous standards and curriculum guidelines;

Senate Joint Memorial 9 – Page 3

- Plan for high-quality professional learning for teachers;
- Process for ongoing evaluation overseen by the task force;
- Method to incorporate the principles of the strategic plan; and
- Plan to ensure long-term sustainability.

RELATIONSHIP

This memorial relates to House Bill 341, which appropriates \$500 thousand from the general fund to PED in FY20 for the purpose of providing grants to eligible entities to develop and implement teacher professional development programs for computer science courses and content.

SL/sb/al